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APPLICANT:	Finepoint Innovations, Inc.
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TITLE OF THE INVENTION:	SURFACE AND CORDLESS TRANSDUCER SYSTEM
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AMENDMENTS UNDER ARTICLE 19

International Bureau of WIPO
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Dear Sir:

In response to the International Search Report and Written Opinion of the International Searching Authority dated 23 December 2005, Applicant submits herewith amendments to the Claims permitted under Article 19. Additions to the claims are shown with underlining and deletions are shown with strike out lining.

Replacement sheets 26-32, incorporating the amendments to the claims are submitted herewith.

Amendments to the Claims:

Claim 1 (currently amended): A surface and cordless transducer system comprising:

(a) a surface having a plurality of overlapping resonant transmitting coils for radiating an electromagnetic field;

(b) a transducer having a resonant circuit responsive to the receipt of electromagnetic radiation from the surface for resonating and storing energy from the radiation, and responsive to a sync signal to transmit an electromagnetic response to the surface; and

(c) said surface also having a position resolving grid, not including said transmitting coils, responsive to electromagnetic radiation from the transducer for determining the position of the transducer.

Claim 2 (original): The surface and cordless transducer system of Claim 1 wherein the resonating frequency of the transmitting coils and the resonant frequency of the transducer resonant circuit are the same.

Claim 3 (original): The surface and cordless transducer system of Claim 1 wherein said sync signal is a pulse width encoded signal received from said transmitting coils.

Claim 4 (original): The surface and cordless transducer system of Claim 1 wherein said surface includes a signal receiving coil for receiving electromagnetic pulse width encoded signals from the transducer.

Claim 5 (original): The surface and cordless transducer system of Claim 4 wherein said signal receiving coil is part of said positioning resolving grid.

Claim 6 (currently amended): A surface and cordless transducer system comprising:

(a) a surface having a plurality of overlapping resonant inductive based transmitting coils for radiating an electromagnetic field;

(b) a signal source for driving the transmitting coils and a controller for turning the transmission of the coils on and off;

(c) a transducer having a resonant circuit responsive to the receipt of electromagnetic radiation from the surface for resonating and storing energy from the radiation, and responsive to a sync signal to transmit an electromagnetic response to the surface; and

(d) said surface also having a position resolving grid, not including said transmitting coils, responsive to electromagnetic radiation from the transducer for determining the position of the radiating transducer.

Claim 7 (original): The surface and cordless transducer system of Claim 6 wherein the resonating frequency of the transmitting coils and the resonant frequency of the transducer resonant circuit are the same.

Claim 8 (original): The surface and cordless transducer system of Claim 6 wherein turning the transmission of the coils on and off provides pulse width encoded signals.

Claim 9 (original) The surface and cordless transducer system of Claim 6 wherein said sync signal is a pulse width encoded signal received from said transmitting coils.

Claim 10 (original) The surface and cordless transducer system of Claim 6 wherein said electromagnetic response is a pulse width encoded signal.

Claim 11 (original): The surface and cordless transducer system of Claim 6 wherein turning the transmission of the coils on and off provides pulse width encoded signals representing commands and wherein said electromagnetic response is a pulse width encoded signal representing encoded data.

Claim 12 (currently amended): A surface and cordless transducer system comprising:

(a) a surface having a plurality of overlapping resonant transmitting coils for radiating an electromagnetic field;

(b) a transducer having a resonant circuit responsive to the receipt of electromagnetic radiation from the surface for resonating and storing energy from the radiation, said transducer having a passive stand-by condition and an active condition, said transducer when in said passive stand-by condition responsive to said electromagnetic radiation from the surface to resonate and responsive to the receipt of a sync signal from the surface to transmit an encoded electromagnetic signal to the surface; and

(c) said surface also having a position resolving grid, not including said transmitting coils, responsive to electromagnetic radiation from the transducer for determining the position of the transducer.

Claim 13 (original): The surface and cordless transducer system of Claim 12 wherein the resonating frequency of the transmitting coils and the resonant frequency of the transducer resonant circuit are the same.

Claim 14 (original) The surface and cordless transducer system of Claim 12 wherein said transducer includes an oscillator that activates the inductive tuned circuit in response to the receipt of a sync signal from the surface to transmit a pulse width encoded electromagnetic signal to the surface.

Claim 15 (currently amended): A surface and cordless transducer system comprising:

(a) a surface having a plurality of overlapping resonant transmitting coils for radiating an electromagnetic field;

(b) a transducer having a first resonant circuit responsive to the receipt of electromagnetic radiation from the surface for resonating and storing energy from the radiation, and including an oscillator that activates the first resonant circuit in response to the receipt of a sync signal from the surface to transmit a pulse width encoded electromagnetic signal to the surface, and including a second resonant circuit, having a different resonating frequency than said first resonant circuit, for transmitting a second electromagnetic signal to the surface to resolve the transducer position; and

(c) said surface also having a position resolving grid, not including said transmitting coils, responsive to electromagnetic radiation from the second resonant circuit of the transducer for determining the position of the transducer.

Claim 16 (currently amended): A surface and cordless transducer system comprising:

(a) a surface having a plurality of overlapping resonant inductive based transmitting coils for radiating an electromagnetic field;

(b) a signal source for driving the transmitting coils and a controller for turning the transmission of the coils on and off;

(c) a transducer having a resonant circuit responsive to the receipt of electromagnetic radiation from the surface for resonating and storing energy from the radiation, and responsive to

a sync signal to transmit an electromagnetic response to the surface;

(d) said surface also having a position resolving grid, not including said transmitting coils, responsive to electromagnetic radiation from the transducer for determining the position of the radiating transducer; and

(e) means for squelching the resonant transmitting coils when they are turned off.

Claim 17 (original): The surface and cordless transducer system of Claim 16 wherein said means for squelching comprises circuit means for shorting out a selected transmit coil when the coil is turned off.

Claim 18 (original): The surface and cordless transducer system of Claim 16 wherein said means for squelching the resonant transmitting coils comprises transmitting coils having a resonant frequency different than the resonating frequency of the transducer resonant circuit and driving the transmitting coils with a signal having the frequency of the transducer resonant circuit.

Claim 19 (currently amended): A method of transmitting power and data from a surface to a transceiver and transmitting data from the transceiver to the surface comprising:

(a) providing a surface having a plurality of overlapping resonant transmitting coils for radiating an electromagnetic field;

(b) driving said coils to produce an electromagnetic field at the resonant frequency of the coils;

(c) turning the driving on and off to produce pulse width encoded electromagnetic signals;

(d) providing a transducer having a resonant circuit responsive to the receipt of electromagnetic radiation from the

surface for resonating and storing energy from the radiation;

(e) placing said transducer in said electromagnetic field;

(f) transmitting a pulse width encoded sync signal from the surface to the transducer;

(g) transmitting a pulse width encoded signal from the transducer to the surface in response to the sync signal;

(h) providing a position resolving grid, not including said transmitting coils, at said surface to receive electromagnetic radiation from said transducer; and

(i) determining the position of the transducer.

Claim 20 (new): A surface and cordless transducer system comprising:

(a) a surface having a plurality of overlapping resonant inductive based transmitting coils for radiating an electromagnetic field;

(b) a signal source for driving the transmitting coils and a controller for turning the transmission of the coils on and off;

(c) a transducer having a resonant circuit with a resonant frequency the same as resonant frequency of the transmitting coils responsive to the receipt of electromagnetic radiation from the surface for resonating and storing energy from the radiation, and responsive to a sync signal to transmit an electromagnetic response to the surface; and

(d) said surface also having a non-resonant position resolving grid, not including said transmitting coils, responsive to electromagnetic radiation from the transducer for determining the position of the radiating transducer.

Claim 21 (new): A surface and cordless transducer system comprising:

(a) means for powering a cordless transducer comprising a surface having resonant transmitting coils for transmitting electromagnetic energy at a resonant frequency from the surface and for transmitting encoded data to a transducer;

(b) a transducer having a resonant receiving circuit turned to said resonant frequency for receiving power and data from said surface, said transducer when enabled, transmitting back to said surface encoded analog signals to provide digital data to the surface; and

(c) a non-resonant position resolving grid responsive to the analog signals transmitted by the transducer for determining the position of the transducer on the surface.

STATEMENT UNDER ARTICLE 19(1)

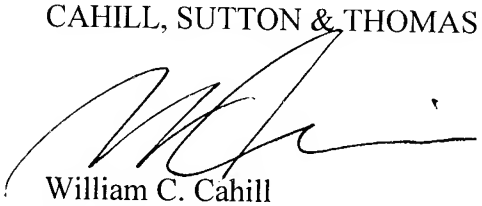
The cited reference to Fleck et al. includes transmitting coils 67 for radiating an electromagnetic field (column 9, lines 29-49). Fleck et al. uses these transmitting coils as a position resolving grid for determining the position of the transducer (column 9, lines 59-64). However, Fleck et al. does not provide separate coils or loops to provide power to the transducer and to resolve the transducer position respectively. That is, the functions of powering the transducer and of determining its position are independent and achieved through separate and independent grids or coils (application page 5, lines 6-11) and (application page 8, lines 12-20), and particularly lines 8-20 on page 8 wherein it states "The surface transmit coils are independent of the receive tablet coils and are not utilized for position resolving.". The claims have been amended to emphasize this distinction.

The cited reference to Yamanami et al. adds the feature of selecting the resonating frequency of the "transmitting" coils to be the same as the resonant frequency of the transducer. However, this reference also fails to show the use of independent loops or coils for powering the transducer and for determining its position. Further, Applicant's system also uses resonant transmitting coils and non-resonant position determining coils (application page 8, lines 12 and 13). Applicant's system also provides information to the transducer and receives information back from the transducer in addition to the transducer position. Information such as various digital data regarding specific address or transducer

conditions. Applicant has added Claims 20 and 21 to emphasize these distinguishing characteristics.

Respectfully submitted,

CAHILL, SUTTON & THOMAS P.L.C.



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What is Claimed:

1. A surface and cordless transducer system comprising:

(a) a surface having a plurality of overlapping resonant transmitting coils for radiating an electromagnetic field;

(b) a transducer having a resonant circuit responsive to the receipt of electromagnetic radiation from the surface for resonating and storing energy from the radiation, and responsive to a sync signal to transmit an electromagnetic response to the surface; and

(c) said surface also having a position resolving grid, not including said transmitting coils, responsive to electromagnetic radiation from the transducer for determining the position of the transducer.

2. The surface and cordless transducer system of Claim 1 wherein the resonating frequency of the transmitting coils and the resonant frequency of the transducer resonant circuit are the same.

3. The surface and cordless transducer system of Claim 1 wherein said sync signal is a pulse width encoded signal received from said transmitting coils.

4. The surface and cordless transducer system of Claim 1 wherein said surface includes a signal receiving coil for receiving electromagnetic pulse width encoded signals from the transducer.

5. The surface and cordless transducer system of Claim 4 wherein said signal receiving coil is part of said positioning resolving grid.

6. A surface and cordless transducer system comprising:

(a) a surface having a plurality of overlapping resonant inductive based transmitting coils for radiating an electromagnetic field;

(b) a signal source for driving the transmitting coils and a controller for turning the transmission of the coils on and off;

(c) a transducer having a resonant circuit responsive to the receipt of electromagnetic radiation from the surface for resonating and storing energy from the radiation, and responsive to a sync signal to transmit an electromagnetic response to the surface; and

(d) said surface also having a position resolving grid, not including said transmitting coils, responsive to electromagnetic radiation from the transducer for determining the position of the radiating transducer.

7. The surface and cordless transducer system of Claim 6 wherein the resonating frequency of the transmitting coils and the resonant frequency of the transducer resonant circuit are the same.

8. The surface and cordless transducer system of Claim 6 wherein turning the transmission of the coils on and off provides pulse width encoded signals.

9. The surface and cordless transducer system of Claim 6 wherein said sync signal is a pulse width encoded signal received from said transmitting coils.

10. The surface and cordless transducer system of Claim 6 wherein said electromagnetic response is a pulse width encoded signal.

11. The surface and cordless transducer system of Claim 6 wherein turning the transmission of the coils on and off provides pulse width encoded signals representing commands and wherein said electromagnetic response is a pulse width encoded signal representing encoded data.

12. A surface and cordless transducer system comprising:

(a) a surface having a plurality of overlapping resonant transmitting coils for radiating an electromagnetic field;

(b) a transducer having a resonant circuit responsive to the receipt of electromagnetic radiation from the surface for resonating and storing energy from the radiation, said transducer having a passive stand-by condition and an active condition, said transducer when in said passive stand-by condition responsive to said electromagnetic radiation from the surface to resonate and responsive to the receipt of a sync signal from the surface to transmit an encoded electromagnetic signal to the surface; and

(c) said surface also having a position resolving grid, not including said transmitting coils, responsive to electromagnetic radiation from the transducer for determining the position of the transducer.

13. The surface and cordless transducer system of Claim 12 wherein the resonating frequency of the transmitting coils and the resonant frequency of the transducer resonant circuit are the same.

14. The surface and cordless transducer system of Claim 12 wherein said transducer includes an oscillator that activates the inductive tuned circuit in response to the receipt of a sync signal from the surface to transmit a pulse width encoded electromagnetic signal to the surface.

15. A surface and cordless transducer system comprising:

(a) a surface having a plurality of overlapping resonant transmitting coils for radiating an electromagnetic field;

(b) a transducer having a first resonant circuit responsive to the receipt of electromagnetic radiation from the surface for resonating and storing energy from the radiation, and including an oscillator that activates the first resonant circuit in response to the receipt of a sync signal from the surface to transmit a pulse width encoded electromagnetic signal to the surface, and including a second resonant circuit, having a different resonating frequency than said first resonant circuit, for transmitting a second electromagnetic signal to the surface to resolve the transducer position; and

(c) said surface also having a position resolving grid, not including said transmitting coils, responsive to electromagnetic radiation from the second resonant circuit of the transducer for determining the position of the transducer.

16. A surface and cordless transducer system comprising:

(a) a surface having a plurality of overlapping resonant inductive based transmitting coils for radiating an electromagnetic field;

(b) a signal source for driving the transmitting coils and a controller for turning the transmission of the coils on and off;

(c) a transducer having a resonant circuit responsive to the receipt of electromagnetic radiation from the surface for resonating and storing energy from the radiation, and responsive to a sync signal to transmit an electromagnetic response to the surface;

(d) said surface also having a position resolving grid, not including said transmitting coils, responsive to electromagnetic radiation from the transducer for determining the position of the

radiating transducer; and

(e) means for squelching the resonant transmitting coils when they are turned off.

17. The surface and cordless transducer system of Claim 16 wherein said means for squelching comprises circuit means for shorting out a selected transmit coil when the coil is turned off.

18. The surface and cordless transducer system of Claim 16 wherein said means for squelching the resonant transmitting coils comprises transmitting coils having a resonant frequency different than the resonating frequency of the transducer resonant circuit and driving the transmitting coils with a signal having the frequency of the transducer resonant circuit.

19. A method of transmitting power and data from a surface to a transceiver and transmitting data from the transceiver to the surface comprising:

(a) providing a surface having a plurality of overlapping resonant transmitting coils for radiating an electromagnetic field;

(b) driving said coils to produce an electromagnetic field at the resonant frequency of the coils;

(c) turning the driving on and off to produce pulse width encoded electromagnetic signals;

(d) providing a transducer having a resonant circuit responsive to the receipt of electromagnetic radiation from the surface for resonating and storing energy from the radiation;

(e) placing said transducer in said electromagnetic field;

(f) transmitting a pulse width encoded sync signal from the surface to the transducer;

(g) transmitting a pulse width encoded signal from the transducer to the surface in response to the sync signal;

(h) providing a position resolving grid, not including said transmitting coils, at said surface to receive electromagnetic radiation from said transducer; and

(i) determining the position of the transducer.

20. A surface and cordless transducer system comprising:

(a) a surface having a plurality of overlapping resonant inductive based transmitting coils for radiating an electromagnetic field;

(b) a signal source for driving the transmitting coils and a controller for turning the transmission of the coils on and off;

(c) a transducer having a resonant circuit with a resonant frequency the same as resonant frequency of the transmitting coils responsive to the receipt of electromagnetic radiation from the surface for resonating and storing energy from the radiation, and responsive to a sync signal to transmit an electromagnetic response to the surface; and

(d) said surface also having a non-resonant position resolving grid, not including said transmitting coils, responsive to electromagnetic radiation from the transducer for determining the position of the radiating transducer.

21. A surface and cordless transducer system comprising:

(a) means for powering a cordless transducer comprising a surface having resonant transmitting coils for transmitting electromagnetic energy at a resonant frequency from the surface and for transmitting encoded data to a transducer;

(b) a transducer having a resonant receiving circuit turned to said resonant frequency for receiving power and data from said surface, said transducer when enabled, transmitting back to said surface encoded analog signals to provide digital data to the surface; and

(c) a non-resonant position resolving grid responsive to the analog signals transmitted by the transducer for determining the position of the transducer on the surface.